

BEST AVAILABLE COPY



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MF

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/464,784 12/17/99 FREEMAN

M COS99034

EXAMINER

LMC1/0925

TECHNOLOGY LAW DEPARTMENT
MCI WORLD COM INC
1133 19TH STREET N.W.
WASHINGTON DC 20036

CHOW, C

ART UNIT

PAPER NUMBER

2749

DATE MAILED:

09/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/464,784

Applicant(s)

M. Freeman et al.

Examiner

Charles Chow

Group Art Unit

2749

☒ Responsive to communication(s) filed on 12/17/99

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-27 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-27 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al. (US 5,873,030) in view of Jaiswal et al. (US 6,002,754).

Mechling et al. teach **claim 1**, "an apparatus for managing call billing records of communications (comm) network users comprising: a communications network operative to carry user calls; a gateway communicating with the network and operative to collect call billing data from the network in a first data structure format; a communication link coupled to the gateway; and a network processor communicating with the gateway via the communication link and operative to receiver the collected call billing data in the first data structure format". See in abstract, in Fig. 2c, 2d, it shows a method and system for nationwide mobile-telecommunications billing, comprising the communication network as shown in Fig. 1-2d for carrying user telephone calls. The national mobile service platform 210 (NMSP) comprises mobile-access-tandem, 224, for communication with the other carriers 250, 260, and the mobile-switching-centers, 232A-F of the Local-mobile-network 112A-F. The NMSP acts as a gateway to communicate with the local billing collection

Art Unit: 2749

network 112A-F. In abstract, it shows the local-mobile-networks are communicatively connected by the signaling network to the NMSP. The NMPS collects the call traffic events records for all calls incurred in the Local-mobile-network and generates billing information. The NMSP uniforms the collected data by converting the collected data into the Master-call-detail-records (MCDR). Also, refer to column 2, line 37 to column 3, line 9; column 3, line 51 to column 4, line 30; column 4, line 49 to column 6, line 5; column 18, line 45-60. In table 1, it shows the MCDR record.

Mechling et al. does not show the conversion to the second format.

Jaiswal et al. teach "...convert the collected call billing data from the first data structure format to a second data structure format". See in Fig. 1-3; in abstract; in column 2, line 34, to column 3, line 33; in column 6, line 30 to column 8, line 7, it shows a billing formatter of the telephone systems comprises the intelligent peripherals in the Advanced intelligent network AIN. In abstract, it shows the intelligent peripheral IP3 of the billing system converts the raw data into the formatted objects. In column 4, line 40-58, Fig. 8-11, it shows the converted format has the Bellcore AMA Format (BAF).

Jaiswal et al. teach **claim 2**, "...wherein the gateway comprises a signaling gateway". See in column 2, line 47-67, it shows the hierarchical network of signaling transfer points STP 4 and adjunct system 5. The SSP2 communicates through the STPs with a service control point SCP 6, using signaling system and SS7 packet-switched message format. The IP3, gateway, and SCP 6 coordinate service logic functions using a known "1129+" signaling protocol. Therefore, it would have been obvious to one of ordinary skill in the art at the time of

Art Unit: 2749

invention to modify and add Jaiswal et al.'s IP3 "1129+" signaling protocol to Mechling et al. such that the billing process could have a standard communication signaling protocol to rely upon.

Mechling et al. teach **claim 3**, "...wherein the network processor comprises an interface that mates with the communication link". See in Fig. 2d, it shows the NMSP 210 comprises the interface 224, the mobile access tandem, for interfacing with the different Local-mobile-networks, the other carries, 250, 260.

Mechling et al. teach **claim 4**, "...network polls the gateway to collect the collected call billing data in the first data structure format". Refer to the disclosure discussion in claim 1, in column 18, line 45-60, it shows collecting traffic information at Local-mobile-network and formatting the collected call traffic information into a first MCDR structure format.

2. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al. in view of Jaiswal et al., and further in view of Witzman et al. (US 5,737,399).

In the above, it has been shown the disclosed features were taught by Mechling et al., Jaiswal et al. However, the combination of the above prior arts does not explicitly show the raw data of the call event records (CERs).

Witzman et al. teach **claim 5**, "...first data structure format comprises raw ASG call event records (CERs). See in abstract, Fig. 2A, it shows a network's system architecture having

Art Unit: 2749

the centralizing storage and verification element. In column 1, line 18-21, in column 3, line 4-12, in column 4, line 63 to column 5, line 4, it shows the captured billing records comprises the call event record (CER).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and replace the first data format of Mechling et al., with the CER first format from Witzman et al., such the first format could be easily converted to the other secondary structured formats.

Regarding **claim 6**, the second Bellcore AMA BAF format has shown above in claim 1.

Regarding **claim 7**, the disclosure above in claims 1-4 has shown the claimed features for the data network communicating with the network processor and the receiving of the second data format.

3. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al. in view of Jaiswal et al., and further in view of Witzman et al., and further in view of Kay et al. (US 5,575,894).

In the above, it has been shown the disclosed features were taught by Mechling et al., Jaiswal et al., and Witzman et al. However, the combination of the above prior arts does not explicitly show the local traffic system.

Kay et al. teach **claim 8**, "...data network comprises a local traffic system (LTS)". See in abstract, Fig. 1-3, and in column 3, line 3-25, it shows a virtual foreign exchange service system having at least one interoffice trunk carries communication traffic between the local exchange central office switched system and the foreign exchange central office switching

Art Unit: 2749

system for billing purpose having the selective procedures.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Kay et al.'s local exchange central office of the local call traffic to Mechling et al. as modified above, such that the local billing data could be easily collected by the local exchange central office.

Regarding "the second data structure format ...AMA format". Refer to the above disclosure discussion in claims, 1-4.

Mechling et al. teach **claim 9**, "...a network platform". See in Fig. 2d, it shows the NMSP platform for processing the call billing data records.

Regarding **claim 10**, the claimed features are covered by the disclosed patents shown above in claims 1-4. Therefore, it is rejected for the same rationale.

4. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al. in view of Jaiswal et al., and further in view of Herbert (US 5,333,183).

In the above, it has been shown the disclosed features were taught by Mechling et al., Jaiswal et al. However, the combination of the above prior arts does not explicitly show the periodically receiving of the billing data.

Regarding **claim 11**, "data network communicating with the network processor", refer to the disclosure columns in claim 1 above.

Mechling et al. as modified above does not show the periodically receiving the billing data.

Art Unit: 2749

Herbert teaches , "...operative to periodically receive the collected call billing data in the second data format". See in column 11, line 67 to column 12, line 47, and in column 28, line 22-31, it shows processor-is periodically checks the statistics of the call message-detail-record MDR data records for billing purpose.

Herbert teaches **claim 13**, "...network processor polls the gateway at preset interval". See in column 28, line 22-31, and in table 1, it shows the schedules for periodically running the processes to invoke the administrative processor interface APIF for collecting the message processing. Also, see claim 16, 35, as taught by Herbert.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Herbert's scheduled periodically polling of the APIF for collecting call records, to Mechling et al. as modified above, such the billing collection could update the records according to the different time of the days.

Mechling et al. as modified above does not show the AMA code 625 format.

Herbert teaches **claim 15**, ".....data network comprises a local traffic system (LTS), and wherein the received call billing data in the second data structure format comprises an industry standard automatic message accounting (AMA) structure code 625 format that is used to implement billing processing". In the above, it has shown the local exchange central office. Regarding the AMA code 652, See in Table 7, it shows the structured AMA code 625 format is utilized in the MDR data record system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Herbert's AMA code 625 format to Mechling et al. as modified

above, such that the second structure format could be specified as the AMA code 625 format.

Regarding **claim 12**, the claimed features are covered by the disclosed patents shown above in claim 4. Therefore, it is rejected for the same rationale.

Regarding **claim 14**, the claimed features are covered by the disclosed patents shown above in claim 11. Therefore, it is rejected for the same rationale.

Regarding **claim 16**, the claimed features are covered by the disclosed patents shown above in claim 3. Therefore, it is rejected for the same rationale.

5. Claims 17-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mechling et al. in view of Jaiswal et al., and further in view of Liu et al. (US 5,898,780), and further in view of Wang (US 5,991,746).

In the above, it has been shown the disclosed features were taught by Mechling et al., Jaiswal et al. However, the combination of the above prior arts does not explicitly show the first and second computers.

Liu et al. teach **claim 17**, "...providing a first computer device, a second computer device, and a communication link, the first computer device communicating with the network and the second computer device communicating with the first computer device via the communication". See in Fig. 1, in abstract, in column 2, line 38-65, sever software computer 42 of the billing module system 38 is in communication with the server computer 14 and remote computer 26 for collecting billing records. In column 1, line 9-25, it shows the Internet Service Provider ISP.

Art Unit: 2749

Liu et al. teach "collecting call billing data with the first computer device in a first data structure format". See in Fig. 1, and Fig. 3, it shows the local network ISP 63 having billing system 38, and ISP 64 having the billing system 69 are collecting call billing data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Liu et al.'s billing system module with computer server for local ISP to Mechling et al. as modified above, such that the billing system could collect and process the billing records from the internet.

Mechling et al. as modified above does not show the data communications (comm) protocol.

Wang teaches "transferring the call billing data using a data comm protocol...computer device". See in abstract, it shows the data transferring protocol, TFTP protocol, is utilized for the billing data collector...

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Wang's TFTP data transferring comm protocol to Mechling et al. as modified above, such that the transferring of the billing data could be according to the protocol specified in the TFTP data comm protocol.

Regarding the "converting the call billing data with the second computer device from the first data structure to a second data structure format", Mechling et al. teaches the converting of the different billing data format into the master-call-detail-records MCDR format at the national-mobile-service-platform (NMSP). Refer to claims 6, 15 above for the second Bellcore AMA 625 format.

Art Unit: 2749

Mechling et al. teach **claim 23**, "...routing call billing data for a user via the network processor to a data network". See in Fig. 3f, in column 10, line 6-9, it shows in step 314 the MCDR is transmitted to the user destination data network

Mechling et al. teach the generating of the invoice as shown in Fig. 3e, item 306-4. However, Mechling et al. does not show the routing of the billing data to data network.

Jaiswal et al. teach **claim 24**, "...generating an invoice format he data network for delivery to individual users". See in column 4, line 40-54, it shows the format processor sends billing data, invoice, to customer supplied billing system 60.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Jaiswal et al.'s billing data invoice to Mechling et al. as modified above, such that the user could directly receive the billing invoice information.

Mechling et al. as modified above does not show the generating of the alarm signal.

Witzman et al. teach **claim 27**, "...generating an alarm signal with the network processor".

See in column 2, line 31-55, in column 3, line 13-19, in column 12, line 47-6, it shows the alarm signal is generated according to the collected data from NIC and the corresponding data stored in the network database. Also, Herbert shows the alarm display and alarm report in Fig 19.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Witzman et al.'s alarm generating of the network information concentrator (NIC) to Mechling et al. as modified above, such that the errors in the billing

data collection system could be detected from displayed the alarms.

Regarding **claims 18, 19**, the claimed features are covered by the disclosed patents shown in claim 17 above. Therefore, it is rejected for the same rationale.

Regarding **claims 20-22**, the claimed features are covered by the disclosed patents shown in claim 3 above. Therefore, it is rejected for the same rationale.

Regarding **claim 25**, the claimed features are covered by the disclosed patents shown in claim 3 above.

Regarding **claim 26**, the claimed features are covered by the disclosed patents shown in claims 1, 3, 4 above. Therefore, it is rejected for the same rationale.

Conclusion

6. In the above discussion, Mechling et al. teach the a method and system for nationwide mobile-telecommunications billing, comprising the communication network for carrying user's telephone calls. The national mobile service platform 210 (NMSP) comprises the mobile-access-tandem, 224, for communication with the other carriers 250, 260, and the mobile-switching-centers, 232A-F of the Local-mobile-network 112A-F. The NMSP acts as a gateway to communicate with the local billing collection network 112A-F. The NMPS collects the call traffic events records for all calls incurred in the Local-mobile-network and generates billing information. The NMSP uniforms the collected data by converting the collected data into the Master-call-detail-records (MCDR). In table 1, it shows the MCDR record. Jaiswal et al. teach a billing formatter of the telephone systems comprises the intelligent peripherals in the Advanced intelligent network AIN. The intelligent peripheral

IP3 of the billing system for converts the raw data into the formatted objects. The converted format has the Bellcore AMA Format (BAF). The hierarchical network having the signaling transfer points STP 4 and adjunct system 5. The SSP2 communicates through the STPs with a service control point SCP 6, using signaling system and SS7 packet-switched message format. The IP3, gateway, and SCP 6 coordinate service logic functions using a known "1129+" signaling protocol. Witzman et al. teach the alarm generating of the network information concentrator (NIC). Kay et al. teach the local exchange central office of the local call traffic. Herbert teaches the AMA code 625 format. Liu et al. teach the billing system module with computer server for local ISP. Wang teaches the TFTP data transferring comm protocol.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Below is a list of the cited prior arts.

- A. US 5,982,865, Nov. 1999, Creamer et al. teach the solution for flexible customer's billing by utilizing the intelligent peripherals in the AIN. The billing system comprises the *means for collecting, generating and outputting the billing data* running on the intelligent peripheral subsystem, as shown in Fig. 1-3B.
- B. US 5,920,613, July 1999, Alcott et al. teach the method and system for generating billing record, as shown in Fig. 1-3, based on the stored rate plans for the telephone calls to calculate the final toll amount.
- C. US 5,699,528, Dec. 1997, Hogan teaches the system and method for bill delivery and payment over a communications network. The server computer for the world wide web

Art Unit: 2749

of the internet could generate the *invoice for user*, as shown in Fig. 3, 4.

D. US EP 0 647 055 A1, May 1995, Grimes teaches the cellular telephone *billing management system. The amounts of various classes of the service used in the current billing period are downloaded and displayed at the user's phone terminal for user to access the provider's information on all the chargers in real-time without burdening the provider.*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703)-308-6732.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D. C. 20231

Or Faxed to: (703)-308-6306 (for formal communications intended for entry)

Or hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor, Receptionist.

For general inquiry or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703)-305-3900.

C. Chow

Sept./8/2000.


DANIEL S. HUNTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700